REMARKS

The Examiner rejects Claims 1-3 and 5-6 under 35 U.S.C.§102(b) as being anticipated by Nakashima (U.S. 5,479,490) and Claims 4 and 7-24 under 35 U.S.C.§103(a) as being unpatentable over Nakashima in view of Lustgarten et al. (U.S. 6,389,398).

Applicant respectfully traverses the Examiner's rejections. Applicants submit that the cited references fail to teach, alone or collectively, at least the following italicized features of the rejected independent claims:

> 1. An interactive voice response system for a telecommunications system, comprising:
> an adjunct processor that outputs an output data stream to a user; and
> a speech gateway enabling system comprising:
> a speech recognition engine operable to identify words in an input voice stream received from the user on a first communication path extending between the user and the speech gateway enabling system and
> *a speech gateway controller operable (a) to transfer at least a portion of the input voice stream from the first communication path to a second communication path extending between the speech gateway enabling system to the adjunct processor and (b) to transfer the at least a portion of the input voice stream from the first communication path to the speech recognition engine for processing.*
>
> 7. A method of providing interactive voice response capability in a telecommunications system, comprising:
> *(a) directing to a speech recognition engine at least a portion of an input voice stream received from a user on a first communication path extending between the user and a first adjunct processor;*
> (b) detecting, with the speech recognition engine, at least some of the words in the at least a portion of the input voice stream;
> (c) *transferring the input voice stream to a second communication path extending between the first adjunct processor and a second adjunct processor;*
> (d) comparing at least some of the detected words with a grammar, the grammar correlating a plurality of words with a corresponding plurality of command codes, to identify corresponding command codes for each of the at least some of the detected words; and
> (e) transmitting a command signal corresponding to at least one identified command code on the second communication path.

17. A system of providing interactive voice response capability in a telecommunications system, comprising:

first and second adjunct processors;

a speech recognition engine that detects at least some words in an input voice stream received from a user on a first communication path extending between the user and the first adjunct processor;

comparing means for comparing at least some of the detected words with a grammar, the grammar correlating a plurality of words with a corresponding plurality of DTMF codes, to identify corresponding DTMF codes for each of the at least some of the detected words;

directing means for directing to the speech recognition engine at least a portion of the input voice stream;

transferring means for transferring the at least a portion of the input voice stream to a second communication path extending between the first adjunct processor and the second adjunct processor; and

transmitting means for transmitting a DTMF signal corresponding to at least one identified DTMF code on a second communication path extending between the first adjunct processor and the second adjunct processor.

The present invention is directed to a speech gateway enabling system that provides a Telephone User Interface or TUI, that is responsive to multi-frequency control signal(s), for an adjunct processor to a telecommunications switching system. The speech gateway enabling system converts a voice stream into one or more appropriate DTMF control signals and transmits the control signals to the adjunct processor. In an illustrative example, the adjunct processor is a voice messaging system that interacts with callers to provide a voice message-delivery service between the calling and called parties.

Nakashima is directed to a system that can be subjected to remote control by an input voice command. The system comprises an automatic answering circuit 5 (Figs. 2, 2A, and 2B) (which the Examiner analogizes to the "adjunct processor") having voice input 24, voice output 38, voice command request input 45, multi-frequency signal input 35, and start output 44, a speech network 9 (which the Examiner analogizes to the "speech gateway enabling system"), an internal line 8,

connected to an external office line (not shown), a speech recognition circuit 41 with associated memory 144 (which the Examiner analogizes to the "speech recognition engine"), a control circuit 43 (which the Examiner analogizes to the "speech gateway controller"), a confirmation tone transmission circuit 25, and a dialer 33. As set forth at col. 9, line 24, through col. 10, line 9, a voice command request tone is transmitted from the voice output terminal 38 to the caller via the office line. After listening to the tone, the caller speaks a voice command signal. The voice command signal is directed to the speech recognition circuit 41. The corresponding command is identified by the circuit 41 and forwarded to the control circuit 43. The control circuit 43, drives the dialer 15 to output a multi-frequency signal corresponding to the command to the automatic answering circuit 5, which performs the requested command. A confirmation tone is also outputted by the confirmation tone transmission circuit to the caller indicating successful voice recognition of the command signal.

Nakashima does not forward the voice command signal to the answering circuit 5. Switches SW6 and SW7 are not turned "on" at the same time. When the circuit 5 outputs a signal of H level, switch SW6 is turned off (col. 4, lines 4-8) and switch SW7 is turned on (col. 4, lines 29-45, and col. 8, line 59-col. 9, line 2). As can be seen from Fig. 1, when switch SW6 is turned off or is open no voice stream is transmitted to the voice input 24 of the circuit 5. Because switch SW7 is turned on or is closed, the voice stream is diverted to the speech recognition circuit 41. Conversely, when switch SW6 is turned on, the voice stream is transmitted to the voice input 24. Because switch SW7 is turned off, the voice stream is not diverted to the speech recognition circuit 41. Accordingly, a

portion of the voice stream is not directed to *both* the adjunct processor and speech recognition engine as required by the rejected claims.

The Examiner analogizes the first communication path to the line extending from terminal 14 of the automatic answering circuit 5 to switches SW4 and SW7 and the second communication path to the line extending from the voice command request port 45 of the automatic answering circuit 5 to the control circuit 43 and switch SW7. As set forth at column 4, line 29, the signal of H level is output on the line or "first communication path" to cause switch SW4 to be switched to the multifrequency signal terminal 35 side and the switch SW6 to be closed. Not only does the "first communication path" as defined by the Examiner not extend from the speech gateway enabling system to the user but also the line does not carry an input voice stream from the user, as required by the claims. Moreover, as noted previously, when switch SW6 is switched to this position the voice input from the user is directed not to the automatic answering circuit 5, but to the speech recognition circuit 41.

Lusgarten et al. fails to address the deficiencies of Nakashima. Lustgarten et al. is directed to an IVR system for an information network and a method for storing and executing user queries stored on the network so that such queries do not have to be re-entered each time a user wants to access information from or execute a transaction on the network. The system can also be programmed to automatically execute the query at a predetermined time or times and deliver information retrieved from the network and/or confirmation of the execution of a transaction on the network to the user in a format specified by the user.

Accordingly, the rejected claims are allowable.

The dependent claims provide further bases for allowability.

By way of example, dependent Claim 6 requires, inter alia, the speech gateway controller to direct at least a portion of the output data stream from the second communication path to the speech recognition engine. This operation is neither suggested nor disclosed by Nakashima and Lustgarten et al.

Dependent Claim 8 requires the directing and transferring steps to occur at least substantially simultaneously. As noted above, Nakashima, at best, teaches that the steps are performed at different times.

Dependent Claim 9 teaches the use of a switch symbol to at least one of enable and disable the directing step (a). *See also* Claims 15, 18, and 23.

Dependent Claim 13 teaches that the transferring steps (c) and (f) occur at least substantially simultaneously.

Dependent Claim 14 is directed to the muting of the first communication path when the transmitting step (e) is performed. *See also* Claim 22.

Dependent Claim 16 is directed to the steps of: (f) determining if one of the first and second communication paths has been disconnected and (g) when one of the first and second communication paths has been disconnected, disconnecting the other of the first and second communication paths. *See also* Claim 24.

Applicant has added new Claims 25-42, which are also allowable. By way of illustration, independent Claim 29 is neither suggested nor disclosed by Nakashima or Lustgarten et al.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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Date: June 26, 2003